Notes from URGWOM Steering Committee Meeting; March 10, 2005; 10:00 AM; Bureau of Reclamation Conference Room, Albuquerque

In Attendance:

Cyndie Abeyta, USFWS

Tim Darden, NMDA

Ellen Dietrich, SAIC/Corps

Don Gallegos, Corps

Nancy Hanks, Paso del Norte Watershed Council

Debbie Hathaway, SSPA/NMISC

Conrad Keyes, Jr., Consultant to Corps

William J. Miller, WJM Engineering, Inc./Corps

Michael Roark, USGS

Garret Ross, USBR

April Sanders, Corps

Nabil Shafike, NMISC

Zhuping Sheng, TAMU

Marc Sidlow, Corps

Dave Wilkins, Corps consultant

Edie Zagona, CADSWES

- April Sanders opened the meeting. After introductions, she turned the meeting over to Zhuping Sheng to give a presentation on the Paso del Norte Watershed Council Coordinated Water Resources Database Project. Zhuping used a PowerPoint presentation and took questions. The presentation and discussion are summarized below.
  - Project background:
    - Funding was provided by El Paso Water Utilities, Corps of Engineers, and USDA Rio Grande Basin Initiative on Irrigation Efficiency.
    - The Coordinated Database Project was intended to facilitate data sharing and access, with a goal to enhance water resources management in region. The Project was developed to meet the need to model for better planning and management in order to improve water delivery efficiency due to water shortages.
    - In order to develop an accurate, useable model, water resource data are needed. It is important to utilize historic relationships among agencies and groups to access water resource data and gain coordination, especially because not all data are currently publicly accessible.
    - The New Mexico-Texas Water Commission was established to address water conflicts, and the Paso del Norte Watershed Council was developed from environmental concerns as an advisory body to the New Mexico-Texas Water Commission.
  - Findings and outcomes of Coordinated Database Project:
    - The findings and data developed for the first two Phases of the Project are available on the website (http://www.pdnwc.org/), which includes a geographic interface for data access using ArcIMS (Internet Mapping Server), a base map for background information, and FGDC compliant metadata.
    - There is improved quality assurance and quality control on new data, compared to existing data.
    - The Project assesses linkage of data with future model development, and explored protocols for data transfer and query.
    - Two technical reports summarizing findings and recommendations are available in hard copy and electronically. Copies of the Phase II report were distributed at the meeting.

- The Watershed Council sponsors workshops to promote data sharing and stakeholder needs in order to develop cooperation among regional stakeholders.
- Data sources come from 6 federal, 3 state, 3 regional/local agencies or other organizations, including the following:
  - Geographic—Digital Elevation Models (DEM), gage locations, well information from drillers' reports, other
  - Surface water system—river flows, water quality (both historic and real-time), canal diversions, return flows, wasteway spills
  - Groundwater system—historic and real-time water levels, water quality, well production, water rights
  - Linkage with model development (how data will be used in the future) will be made available—input from Coordinated Database Project website to models; output from models to the Coordinated Database Project website

- Data sharing and spatial queries:
  - Several formats and transfer protocols
  - Three ways of performing spatial queries—tabular, spatial (based on map features), and combination of tabular and spatial
- Application of Coordinated Database Project for modeling:
  - To expand URGWOM planning model, now addressing only flood control below Elephant Butte Dam
  - Can use RiverWare water quality component
  - Can use to provide information needed for groundwater/surface water models and groundwater modeling
  - Can incorporate modeling results to share on website
- Recommendations for future phases, next 2 years:
  - Need more data sources compiled, such as water quality and biological resources
  - Install new monitoring stations and include locations and data in map server on website
  - Establish new links with URGWOM
- Phase III recommendations:
  - Develop and implement user needs survey to identify data of interest, access mechanisms, and to improve website.
  - Develop Microsoft Access database of water resources data to facilitate public access.
  - Provide online help.
  - More funding is needed.
  - The Watershed Council is seeking other ideas for future additions to the Project and the website.
  - **Recommendation from Steering Committee**: Separate data compiled by an entity or for an entity, such as the Corps or consultants, from data collectors, such as USGS, EPWU, and schools. It might be difficult to identify and separate some compiled and collected data. For example, USGS compiles some data and collects some.

- **Question:** What kind of data was obtained from the Bureau of Reclamation?
  - **Answer:** Hard copy summary data only. It would require time, possibly for an intern or student, to enter electronically for posting on the website. The source data would be needed for use in modeling.
- **Question:** What types of Elephant Butte Irrigation District (EBID) data are available?
  - **Answer:** There is a link to the EBID website, which provides real-time diversion data from about 20 sites. Their data are not archived in the Coordinated Database. Links to other data sources are provided in some cases to avoid having to develop written agreements to use and acquire data with all groups. The links, combined with the data on the Paso del Norte website, pulls available information together so users can find it in one place.
- Zhuping concluded his presentation with a demonstration of the map viewer and data on the website (http://river.nmsu.edu/website/pdnwc/viewer.htm).

❖ Edie Zagona, from CADSWES, demonstrated the new Management Scenario Function developed for RiverWare at the request of the URGWOM Tech Team and funded by the Albuquerque Corps.

- Scenario Manager can be used only with the full RiverWare version, not the viewer. In the viewer, the user can look at the Scenario Manager, but cannot change any values.
- The purpose is to structure functions so users can have some idea what to change for model runs and to identify the reasonable range of parameter values.
- When the model is first opened, the Scenario Manager enables the programmer to add slots that can be changed by other users without enabling all slots to be changed. Slots may include tables, time series data, and any other data in the model that a user might want to change.
- The Scenario Manager allows the programmer to add comments to the slots included in a particular model (why want to change; recommend selection in combination with other slots. Comments can establish minimum and maximum values or other explanations.
- Once slots are selected, the model can be saved as a baseline with which to compare alternative runs with different values in the slots. After saving a baseline, the user can only change the slots included in the Scenario Manager.
- In the alternative to the baseline, the user can enter comments as slots are changed. The Scenario Manager also saves what values/slots were changed and when, in order to allow for comparisons of the results to the baseline model, and alternatives using the snapshot manager.
- Scenarios can be shared with other users.
- Some work on the output features is left to be done. CADSWES plans to release the Scenario Manager in next version of RiverWare around the end of April.
- Dave Wilkins asked if it is possible to change many values of the slots by a multiplier, such as a 10% increase or by a constant. Edie replied that this is not now available, but she will request that this function be added prior to release.

❖ URGWOM Phases I and II testing plans and activities were reviewed.

- Bill Miller reported that there is not much new to report on Phase I testing since the February Steering Committee meeting.
  - Bill will work on updating Quality Assurance/Quality Control Plan for model testing and provide to the subcommittee and Tech Team for review. He will request comments back from Technical Team within 2 weeks, and will then circulate to Steering Committee for approval at the next meeting.

- The intent of the QA/QC Plan revision is to reflect the current status of Phases I and II testing.
- A copy of the Phase I testing information will be included with the revised plan.
- April Sanders requested that the Steering Committee be provided with a summary report of the Phase I testing comments, including those submitted during the Paso del Norte Watershed Council workshop. Zhuping Sheng will provide those comments to Bill for inclusion in the report.

❖ Dave Wilkins reported on the plans for Phase II testing.

- Subcommittee met since the last Steering Committee meeting and selected 3 general scenarios for the second part of testing: use of target flows at San Acacia and Central; changes to the initial Elephant Butte storage amounts; and changes to all inflows. The first part of the Phase II testing will run the original 3 scenarios provided for Phase I, just to familiarize testers with running URGWOM.
- In the second part of the testing, testers will run the 3 scenarios provided, with some values changing but will stay within operating authorities. It will be very helpful to have the scenario manager for the testing, especially for changing values.
- In the third part of the testing, users can make any changes in rules desired. The documentation will present a suggested rule change, possibly the rules changes under consideration by the ESA Collaborative Work Group's Water Acquisition and Management committee.
- Phase II is likely to begin in June, when the Scenario Manager is available and the Draft Upper Rio Grande Basin Water Operations Review and EIS is out for public comment.
- April reported that they are considering holding a workshop so Edie Zagona from CADSWES can provide some training to testers, prior to beginning the model testing.
  - Edie is proposing a 2-day training class. The first day would be for users who want to do URGWOM testing but have not had the full RiverWare training. The second day would be for everyone who wants to do testing, and would include detailed information about URGWOM, as well as how to create and run scenarios.
  - People attending the workshop would be encouraged to bring a laptop with RiverWare already loaded.
  - An advantage to holding the training workshop is to provide potential URGWOM users with an opportunity to try RiverWare before they invest the money in license fees. CADSWES may be able to extend an evaluation license for temporary use of RiverWare, specifically for Phase II testers.
  - April suggested that the testing subcommittee send letters to potential testers with the following information:
    - Plans for Phase II testing and workshop
    - Required computer specifications to run URGWOM
    - Recommendation to contact CADSWES for a temporary RiverWare license
    - Recommendation to have a laptop loaded with RiverWare to bring to the workshop
  - **The Steering Committee concurred with the recommendation to hold the workshop prior to Phase II testing.**

- Mike Roark reviewed recent Tech Team activities. His handout is added to the end of these notes. Additional discussion and questions are summarized below.
  - Updated calendar year tasks were included in a separate handout. Changes made since the last Steering Committee meeting include designating Garret Ross as the leader of the task to track types of water in the model and lowering the task to modify rules to Priority 2.
  - **Question:** Did the Albuquerque Drinking Water Project get incorporated into URGWOM?
    - **Answer:** Yes.
  - **Question:** The high wall in the ground at the Drinking Water Project diversion will change the stream gradient. Was it included in the URGWOM physical model with potential flow changes?
    - **Answer:** The wall will have local effect on flow and may contribute more flow to the drains. It is not currently in URGWOM, but it can be added in the revamp of the model for the middle valley.
  - CADSWES is running tests to figure out target flow problems, but they think most of the problems have been solved.
  - Funding will be needed for CADSWES to develop the methods and objects for the middle valley model improvements. Funding needs are estimated to be $331,000 total cost, without in-kind services. The Technical Team submitted a proposal to the ESA Collaborative Work Group for funding, but the team may need to start before that funding is awarded.
    - **Question:** Would the funding be used to address groundwater/surface water interaction modeling?
      - **Answer:** Yes, this is part of that effort, along with evapotranspiration modeling and other tasks.
  - There may not be a Steering Committee meeting next month. Two weeks advance notice will be provided to the Steering Committee if no meeting will be held. All meetings through July will be held at the Bureau of Reclamation due to carpet installation at the Corps.